

Hamilton Naki, Transplant Surgeon

Chike M. Nzerue, MD, FACP
Nashville, Tennessee

A biographic sketch of Hamilton Naki is presented here. He was a great self-taught surgeon whose contributions to the world of transplantation were largely ignored due to the apartheid system of South Africa. He assisted Christian Barnard in the first human heart transplant in 1967.

Key words: cardiac transplantation



On May 29, 2005, Hamilton Naki passed away. The world of transplantation lost a gentle giant. His place in medical history is based on the fact that with Christian Barnard he performed the first open heart transplant in 1967.¹

Thus, Hamilton Naki must stand toe to toe with other pioneers of medicine, such as Louis Pasteur, Robert Koch and Alexander Fleming. However, Barnard got all the glory, but his quiet, unassuming black assistant was largely ignored due to the apartheid laws of South Africa. Naki was born in the Ngcingane village in the eastern cape province of South Africa in 1926. He attended school there until he quit school at 14, when his family could no longer support his studies. He then moved to Cape Town, where he found work as a gardener tending the lawns at the University of Cape Town Medical School. Ever punctual and diligent, in 1954, he was selected to help Dr. Robert Goetz, who was doing research with laboratory animals. Goetz, a Jewish doctor who had escaped from Nazi Germany, not only recognized Naki's skills, but empathized with a fellow outcast. With time, Naki's responsibilities increased to include shaving, injecting and dissecting animals like pigs, rabbits and dogs. He also assisted Goetz in dissections of the jugular veins of giraffes to study the structure and function of the valves so as to understand why giraffes do not faint when they bend so low to drink water.² By sheer dint of hard work, persistence and dexterity he became an expert in dissection, organ transplantation and making surgical anastomosis.

When Barnard returned to Groote Schuur Hospital as a heart surgeon after training at the University of Minnesota, he asked Naki to join his transplant team. The hospital gave permission, but not before advising Naki to keep his role secret because he was black, and the apartheid laws forbade him from cutting white flesh or dealing with white blood. For 50 years, the hospital records listed him as a gardener.

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In December 1967, a 59-year-old man with terminal heart disease received a heart transplant from a young woman pronounced braindead after a motor vehicle accident. The donor, Denise Darval, was white. In one operating room, Barnard prepared the recipient, Mr. Washansky, to receive the first ever heart transplant. In the next room, Naki, with amazing dexterity, removed the donor heart from Darval, irrigated it with electrolyte solution and passed it to Barnard.² Barnard placed the organ inside Washansky.

Overnight, Barnard became a celebrity. When Naki appeared in some of the postoperative pictures beside Barnard, the hospital claimed he was a gardener. Washansky died about 18 days later from pneumonia. Steroids given to induce immune tolerance apparently made him susceptible to sepsis. One of their transplant patients lived for a year and a half after surgery, but many died. After a while, all heart operations were stopped because of poor outcomes, until cyclosporine became available.

Even today, sepsis remains a major cause of mortality in cardiac transplants.^{3,4} The laboratory stayed busy, training doctors in transplantation using animal models. Naki became excellent at liver transplants and taught these techniques to many residents over the years. Barnard did not acknowledge Naki's role until the end of apartheid in 1991. It is on record that Barnard, before his death in 2001, finally publicly praised the superior technical skills of Naki and his critical role in Barnard's heart transplants.⁵

Naki retired from the University of Cape Town in 1991, living on a monthly pension of a few hundred dollars. His experience and lack of recognition is similar to that of another versatile black technician, Vivien Thomas, who worked with Dr. Alfred Blalock to improve surgical outcomes for patients with cardiac defects at Vanderbilt and Johns Hopkins University.^{6,7} Thomas was awarded an honorary doctorate degree by Johns Hopkins University in 1976. Both Thomas and Naki labored in obscurity due to the fact that they were talented black men who excelled in the prevailing social order of racial segregation in America and the apartheid system in South Africa, respectively. In spite of his ordeal, Naki was never bitter. He was given an honorary doctor of medicine by the University of Cape Town in 2002. He was also honored with the national order of Mapungubwe by the postapartheid government of Nelson Mandela. Ironically, both Naki and Barnard died of heart disease.

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